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EXAMINER

KRUER, KEVIN R

ART UNIT PAPER NUMBER

1773

DATE MAILED: 07/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/729,587	<b>Applicant(s)</b> SHIVELY ET AL.	
	<b>Examiner</b> Kevin R. Krueer	<b>Art Unit</b> 1773	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 02 May 2006.  
 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.  
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-4, 6-8, 10-15 and 17--21 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
 6) ☒ Claim(s) 6-8, 10-15 and 17-21 is/are rejected.  
 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
 10) ☒ The drawing(s) filed on 05 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some \* c) ☐ None of:  
         1. ☐ Certified copies of the priority documents have been received.  
         2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
         3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
     \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-4, 6-8, 10-15, and 17-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claim states the adhesive comprise 5-15% fire retardant but does not state what said percentage is based upon (wt, mol%, vol%, etc).

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-4, 6-8, 10-15 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 01/68360 (herein referred to as Valinski) in view of Levchik et al (US 6,569,928),

Valinski teaches a sunshade comprising first and second PET layers (Figure 4), herein relied upon to read on the claimed "two polymeric film layers." The second base layer may have a light reflecting metal layer provided on the inside surface thereon which partly transmits visible light (page 11, lines 5+). Said light reflecting layer (herein

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relied upon to read on the claimed "metallized layer") comprises an aluminum layer and transmits 50% or less visible light (example 4 and page 4, lines 5+). Said teaching is herein understood to be sufficiently specific to anticipate the claimed light transmittance in claims 2 and 3. The light-reflecting layer is adhered to the surface of the transparent substrate with an adhesive (see Figures). The second base layer may be provided with a protective layer (Figure 4) that is herein relied upon to read on the claimed scratch resistant coating of claim 10. The PET layers may comprise UV light absorbers (page 11, lines 12+) herein relied upon to read on the claimed UV absorbing material. The layers of said window shade may be adhered via an adhesive that comprises 1-5pbw tetrabromobisphenol-A fire retardant in a thermoset polyester urethane composition (abstract). The structure has a haze of less than 25% (page 7, lines 5+). The dried adhesive may comprise 2-15wt% fire retardant (see example 1). The examiner notes which side faces the sun in use does not distinguish the claimed laminate from the laminate taught in Valinski.

Valinski does not teach that the polyester layers should comprise a fire retardant. However, Levchik teaches that resorcinol bis(diphenyl phosphate) may be added to polyester compositions in order to improve the fire retardency thereof (abstract). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to add resorcinol bis(diphenyl phosphate) to the PET layers taught in Valinski. The motivation for doing so would have been to improve the sunshade's fire retardance to meet the desired standard, such as that of the German test method DIN 4102:B2 .

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5. Claims 17, 19, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 01/68360 (herein referred to as Valinski) in view of Levchik et al (US 6,569,928), as applied to claims above, and further in view of Fuchs et al (US 5,740,649).

Valinski in view of Levchik is relied upon as above, but does not teach that the sunshade may be perforated. However, Fuchs teaches that it is known in the art to make a foil "sound permeable" by making a multiplicity of small holes/perforations therein (col 5, lines 18+). The perforations may be spaced 1.2mm from each other (col 7, line 47). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to put micro-perforations into the sunshade taught in Valinski at a spacing of 1.2mm. The motivation for doing so would have been to make the sunshade sound absorbing.

6. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over WO 01/68360 (herein referred to as Valinski) in view of Levchik et al (US 6,569,928), as applied to claims above, and further in view of Jablonka et al (US 4,555,433).

Valinski in view of Levchik is relied upon as above, but does not teach that the sunshade should be formed with a plurality of adjacent cup shaped recesses arranged in the form of a grid. However, Jablonka teaches that forming a element with a plurality of adjacent cup shaped recesses arranged in the form of a grid makes said material sound deadening (abstract). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to form the sunshade taught in Valinski with a plurality of adjacent cup shaped recesses arranged in the form of a grid. The motivation

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for doing so would have been to provide said sunshade with sound deadening properties.

7. The rejection of claims 1-4, 6, 7, 10, and 21 under 35 U.S.C. 103(a) as being unpatentable over Inanuma et al (US 4,978,181) in view of Levchik et al (US 6,569,928), Pengilly et al (US 4,185,046), and Mitsuishi et al (US 4,115,617) has been overcome by amendment. Said references don't teach the use of a polyurethane adhesive.

8. Claims 1-4, 6, 7, 10, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Inanuma et al (US 4,978,181) in view of Levchik et al (US 6,569,928), Mitsuishi et al (US 4,115,617) and WO01/68360 (herein referred to as Valinski).

Inanuma teaches a sunshade comprising a transparent substrate and first and second base layers provided on either surface of the substrate (abstract). Said first and second base layers may comprise PET (col 3, line 8, and col 3, line 37), and are herein relied upon to read on the claimed "two polymeric film layers." The second base layer may have a light reflecting layer provided on the inside surface (col 3, line 44) thereon which partly transmits visible light (abstract). Said light reflecting layer (herein relied upon to read on the claimed "metallized layer") comprises an aluminum layer and transmits 50% or less visible light (col 3, lines 41). Said teaching is herein understood to be sufficiently specific to anticipate the claimed light transmittance in claims 2 and 3. The light-reflecting layer is adhered to the surface of the transparent substrate with an adhesive (col 3, line 45). The second base layer may be provided with a protective

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layer (abstract) that is herein relied upon to read on the claimed scratch resistant coating of claim 10. The laminate may further comprise a UV reflecting layer, herein relied upon to read on the claimed UV absorbing material. The examiner notes which side faces the sun in use does not distinguish the claimed laminate from the laminate taught in the prior art.

Inanuma does not teach that the polyester layers should comprise a fire retardant. However, Levchik teaches that resorcinol bis(diphenyl phosphate) may be added to polyester compositions in order to improve the fire retardency thereof (abstract). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to add resorcinol bis(diphenyl phosphate) to the PET layers taught in Inanuma. The motivation for doing so would have been to improve the sunshade's fire retardance.

Inanuma also does not teach the claimed adhesive composition. However, Valinski teaches a flame retardant optical adhesive for fabricating flame retardant composite films for use as window shades (abstract). The adhesive comprises 1-5pbw tetrabromobisphenol-A fire retardant in a thermoset polyester urethane composition (abstract). The adhesive has a haze of less than 25% (page 7, lines 5+) and is useful for bonding Pet to metal layers (page 9, lines 5+). The dried adhesive may comprise 2-15wt% fire retardant (see example 1). Thus, it would have been obvious to one of ordinary skill in the art to utilize the adhesive taught in Valinski as the adhesive taught by Inanuma because said adhesive is will result in a fire retardant shade.

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Inanuma also does not teach that the PET layers may comprise a UV absorber. However, Mitsuishi teaches PET has the defect that when it is exposed to sunlight for long periods of time, its mechanical properties are markedly deteriorated (col 1, lines 17+). In order to improve the weather resistance of the PET, it has been known to incorporate an ultraviolet absorber in the film. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate an UV absorber into the PET layers taught in Inanuma in order to improve their weatherability. The examiner takes the position that the claimed haze and light transmittance are inherent to the laminate taught in Inanuma because said laminate comprises the same layers comprising the same compositions as the claimed laminate.

#### ***Response to Arguments***

Applicant's arguments filed May 2, 2006 have been fully considered but they are not persuasive.

Applicant argues the assignee/Applicant of the present application is also the assignee for the cited Valinski application and that proof can be provided that the material taught in Valinski does not meet the tighter fire standard currently claimed. Said arguments are noted but is not persuasive in view of the lack of evidence provided. The examiner notes that counsel's argument cannot take the place of evidence. The examiner further notes that the claimed FR properties are considered obvious in view of the teachings of Levchick. The examiner never took the position said fire retardant properties were inherent to the laminate of Valinski. Thus, even if said showing was



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made of record, there is reason to doubt it would be sufficient to overcome the examiner's position.

According to applicant, the position of the UV absorbing PET in the present invention prevents FR material used in the composite from yellowing or bronzing on aging. Applicant argues there is no teaching that the PET containing UV absorber must be outside the FR containing layer. The examiner respectfully disagrees. Valinski teaches a PET layer containing a UV absorber adjacent to an adhesive layer containing a fire retardant. The examiner further notes that applicant must provide evidence of unexpected results if its their contention that the claimed laminate exhibits synergistic fire retardant properties as a result of some inventive concept that was not recognized by the prior art. Specifically, Applicant seems to be arguing the claimed composite film in which PET layers containing UV absorbers are used in a specified layer in the composition in relation to the FR containing layers results in an unexpected result.

With respect to Levchick, Applicant argues the reference teaches the use of RDP in polyester compositions containing high charring polymers but does not teach PET compositions containing said fire retardant. The examiner respectfully disagrees. Levchick teaches the composition may comprise a PET (col 2, lines 42+). Furthermore, the examiner notes the cited art incorporated by reference into Levchick teaches the RDP fire retardant utilized in PET compositions (col 2, lines 60+). Thus, the reference clearly contains the teachings for which the examiner relied upon it: the use of RDP as a fire retardant in PET compositions.

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Applicant further argues RDP in the present specification is added to the polyurethane based adhesive. Said argument is noted but is not commensurate in scope with the claims. The claims merely state that the adhesive contains a fire retardant but do not specify which fire retardant.

According to applicant, Valinski does not teach that improved FR properties can be obtained by using a PET with added fire retardant. The examiner agrees but notes Levchick, not Valinski, was relied upon for such a teaching. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

With respect to Inanuma, Applicant argues said reference does not teach a sunshade containing FR materials and that the problems associated with incorporation of FR materials into transparent shade composites are totally ignored. Said argument is noted but is not persuasive because the rejection never relied upon Inanuma for said teachings. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Applicant further argues the incorporation of FR materials into adhesives of the type disclosed in Pengilly gives rise to high levels of haze which is unacceptable in

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transparent composites. The examiner notes said argument cannot be fully weighed because no evidence has been made of record and counsel's arguments cannot take the place of evidence. Furthermore, the more compelling argument would be that the claimed fire retardant standards and haze limitations cannot simultaneously be obtained utilizing the teachings of Pengilly. The examiner further notes that Pengilly discusses the problems associated with the use of FR in an adhesive and states the adhesive can be somewhat hazy due to the presence of FR. To avoid hazing, Pengilly pre-selected the amount of FR added to the adhesive in order to control the haze of the adhesive.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin R. Kruer whose telephone number is 571-272-1510. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on 571-272-1284. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Kevin R. Kruer  
Patent Examiner-Art Unit 1773